

Mainframe Hosting

Service Description

This service provides mainframe services for hosting agency applications in an Admin-owned and maintained data center facility. Admin supports the IBM z/OS operating system, select database management systems and layered software products on IBM zSeries hardware with logical partition (LPAR). Mainframe storage is required and is charged separately.

Service Notes*

- Admin maintains and supports select software products from Software AG.
- Admin maintains and supports IBM DB/2 Software, AG ADABAS and CA IDMS.

****See Service Detail for additional important Service Notes and Customer Responsibilities.***

Customer Benefits

- **Cost savings** – Customers do not have to invest in dedicated mainframe hardware, operating system (OS) and layered software licenses, data center facilities and personnel.
- **Efficiency** – Sharing common equipment and resources allows for more cost-efficient operations and support.
- **Security** – Admin maintains a high level of logical system security and physical data center security.
- **Scalability** – LPAR configurations can be modified within the existing footprint of the mainframe as business needs change.
- **Support** – Monitoring and response by trained Admin technical staff ensures maximum utilization and minimum Mainframe downtime.

Service Rates

Service Offering	Costs
CPU-A 3081 Central Processor	Contact ARM
CPU-A 3081 Tape Usage	Contact ARM
CPU-A 3081 TSO Session Time	Contact ARM
CPU-A 3081 Tape Mounts	Contact ARM
CPU-A 3081 Disk Storage	Contact ARM
CPU-A 3081 IDMS Transaction Batch	Contact ARM
CPU-A 3081 IDMS Transaction Online	Contact ARM
CPU-A EDB2 DB2 Online CPU	Contact ARM
CPU-A EDB2 Central Processor, z/0Se	Contact ARM
CPU-A E 3490 Tape Usage	Contact ARM
CPU-A EDB2 T S O Session Time	Contact ARM

Service Offering	Costs
CPU-A EDB2 Tape Mounts	Contact ARM
CPU-B 3480 FDS Central Processor	Contact ARM
CPU-B 3480 FDS Tape Usage	Contact ARM
CPU-B 3490 FDS Tape Usage	Contact ARM
CPU-B FDS T S O Session Time	Contact ARM
CPU-B FDS Tape Mounts,	Contact ARM
CPU-B FDS AdaBase Central Processor	Contact ARM
CPU-B FDS Disk Storage	Contact ARM
CPU-B DSS\DHEC Central Processor	Contact ARM
CPU-B 3490 DSS\DHEC Tape Usage	Contact ARM
CPU-B DSS\DHEC T S O Session Time	Contact ARM
CPU-B DSS\DHEC Tape Mounts	Contact ARM
DATA Vault Storage	Contact ARM
TN3270 TSO Session	Contact ARM
CPU-A PDB2 DB2 Online CPU	Contact ARM

Mainframe Hosting – Service Detail

This Admin service includes:

Facilities Management

- Management and monitoring of physical security to data center.
- Management and monitoring of the data center environment (e.g., power and cooling).

Mainframe Engineering

- Installation of hardware and system software in accordance with best practices and State of South Carolina information technology and security policies.
- Evaluate and/or recommend hardware and software enhancements.
- Hardware and software enhancements to the z/OS LPAR over time.
- Upgrades of service components.

Mainframe Logical Partition (LPAR) Maintenance and Administration

- Administration and maintenance of mainframe LPARs to ensure each is reliable, and is available during the defined target availability hours.
- Utilization of vendor software services for maintaining LPARs at recommended level following standard change management procedures.
- Maintenance of current inventory/asset information and support history for each Admin-owned mainframe and related components.
- Standard capacity and performance analysis reporting capabilities to be used by Admin staff

which may be made available to customers.

- Assistance in the provision of diagnostic information to assist with customer application support needs.

Mainframe Support and Monitoring

- 24/7 monitoring, identification and resolution of technical issues for LPARs.
- Incident response based on priority levels.
- Provide diagnostic information to assist with customer mainframe application support needs.
- Ongoing security monitoring and management.
 - Security event monitoring, detection and notification.
 - Periodic vulnerability scanning and reporting.
 - Security compliance audit and reporting.
- Repair or replacement of failing hardware components by IBM service personnel.

Network Connectivity

- Connectivity (physical and logical) within the data center network.

Disaster Recovery

- Mainframe-based data replication and infrastructure disaster recovery.

Related Services

A Mainframe Hosting customer might also be interested in this alternate Admin hosting service which is offered separately:

- Virtual Servers

Service Level Objectives

Service Level Targets

TBD

Additional Service Notes

- Admin conducts periodic disaster recovery (DR) tests and will engage customer agencies as appropriate to participate in the tests.
- The standard patching maintenance window is Sunday from 7-10 p.m. Patches are applied 10 days after release. Patches are occasionally applied sooner based on the risk of the unpatched vulnerability.
- Mainframe storage is required for the mainframe service. Mainframe storage is provided in this service (Mainframe Storage is currently separate from Enterprise Storage – SAN) and is charged separately.

- Mainframe-based data replication and infrastructure disaster recovery is included in this service. LPARs will automatically failover to the Clemson University data center if a disaster incident is experienced at the primary State Data Center. Agency customers are responsible for restarting their individual applications that reside on the impacted LPAR after a site failover (if required by the application).

Customer vs. Admin Responsibilities

This section identifies in detail Admin and customer responsibilities for these service offerings.

Responsibilities	Admin	Customer
Data Center Facilities		
Data Center power, cooling and related support infrastructure.	X	
Data Center network infrastructure.	X	
Data Center facilities physical security.	X	
Data Center facilities structure maintenance and enhancements.	X	
Hardware		
IBM System z system hardware/firmware/software.	X	
IBM System z peripheral hardware/firmware/software.	X	
Mainframe Standard System Software		
LPARs.	X	
Standard security software (anti-virus, host intrusion detection, scanning, etc.).	X	
Standard system management tools.	X	
Application Software		
Custom developed.		X
Agency-specific third-party software purchased by Admin on behalf of the agency.		X
Shared commercially-provided software.	X	
Shared middleware/utility software.	X	
Database (ADABAS/DB2/IDMS/CICS).	X	
Other shared software not defined above.	X	
Initial Provisioning and Configuration Management of:		
IBM mainframe hardware/firmware/software.	X	
Define supported LPAR infrastructure technologies and standards.	X	
Define supported vendor infrastructure products and standards.	X	
Publish change request procedures and lead-times for customer to follow for routine LPAR and operating system service requests.	X	
Install and support major (new version) operating system and third-party system software upgrades as required.	X	
Mainframe applications software.		X

Responsibilities	Admin	Customer
Patching and Lifecycle Configuration Management of:		
Management of the IBM mainframe hardware configurations via the change management process.	X	
Manage the mainframe LPAR configurations via the change management process.	X	
Identify and install necessary system software fixes via change management.	X	
Request vendor technical support for incident issues.	X	
Applications software.		X
Database Software.	X	
Monitoring and Fault Management – Fault Monitoring and Event Notification/Triage, Recovery and Troubleshooting (perform diagnostics, maintenance and break/fix support)		
IBM mainframe hardware/firmware/software.	X	
Monitor operating system utilization through the use of third-party software products.	X	
Maintain source code and develop job control language (JCL) necessary to support all customer applications.		X
Provide problem determination support for all customer coded applications and JCL.		X
Capacity and Performance Management		
Implement and maintain tools for performance/capacity planning.	X	
Provide reporting for system performance and utilization.	X	
Monitor usage to proactively identify capacity or performance issues.	X	
Evaluate, identify and recommend changes to enhance performance.	X	
Recommend system hardware upgrades.	X	
Provide customer growth forecasts.		X
Define requirements for performance/capacity.		X
Recommend corrective action to resolve system performance and capacity problem.	X	X
Security Monitoring and Management		
Security event monitoring, detection and notification.	X	
Periodic vulnerability scanning and reporting.	X	
Security event/vulnerability remediation.	X	X
IBM mainframe hardware/firmware/software controlled access.	X	

All services are delivered in compliance with State of South Carolina Information Security policies, as presented in SCDIS-200.